

REMARKS

The Office Action mailed November 7, 2003 has been received and the Examiner's comments carefully reviewed. Claims 39, 48, 58, and 61 have been amended. Claims 63-72 have been added. No new subject matter has been added. Claims 1, 36-47, 49-50, and 53-72 are currently pending. Applicants respectfully submit that the pending claims are in condition for allowance.

Support for the new claims is found in the specification. For example, support for claim 63 is found in the drawings and on page 2 at line 10, for example. Support for claim 68 is found in the drawings and in the amended specification paragraph of page 6, line 29. Support for claim 72 is found in the drawings and on page 14 at line 1, for example.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 58-62 under 35 U.S.C. §102(b) as being anticipated by Kohrs (U.S. Patent 5,609,636). Applicants respectfully traverse this rejection, but have amended claims 58 and 61 to advance this application to allowance. Applicants reserve the right to pursue the original subject matter via a continuing application.

Kohrs discloses a spinal implant 400 having threaded segments 401-404. The segments are joined by a plurality of rigid supports 405-410. The segments 401-404 and the ridge supports 405-410 define a hollow interior 430 that extends along the longitudinal axis of the implant 400.

I. Claims 58-60

Claim 58 recites an implant having a plurality of columns that connect first and second load bearing surfaces. The columns are aligned one behind another at the longitudinal axis of the implant.

Kohrs does not disclose columns aligned at a longitudinal axis of the implant. Rather, the supports 405-410 are offset from the longitudinal axis of the implant 400. For at least this reason, Applicants respectfully submit that independent claim 58, and dependent claims 59-60 are patentable.

II. Claims 61-62

Claim 61 recites an implant having first and second load bearing surfaces having a width extending perpendicular to a longitudinal axis of the implant, and a midline aligned with the longitudinal axis. A central support member connects the first and second load bearing surfaces at their midlines. Kohrs does not disclose a central support member that connects first and second traverse members at a midline. Rather the supports 405-410 are offset and not centrally located to connect the bearing surfaces at their midlines.

For at least this reason, Applicants respectfully submit that independent claim 61, and dependent claim 62 are patentable.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 61-62 under 35 U.S.C. §102(b) as being anticipated by Knothe (WO 97/15247). Applicants respectfully traverse this rejection, but have amended claim 61 to advance this application to allowance. Applicants reserve the right to pursue the original subject matter via a continuing application.

III. Claims 61-62

Claim 61 recites an implant having a central support member that connects first and second load bearing surfaces at their midlines. The central support member is configured to support loads placed upon the first and second load bearing surfaces.

Knothe does not disclose a central support member configured to support loads placed upon load bearing surfaces. Rather the central member 10 of Knothe is configured to flex such that upper and lower bone-contact faces 3, 4 can be compressed elastically towards the inner chamber of the element to reduce the distance between the faces 3, 4 by 0.5 to 5.0 mm.

At least because Knothe does not meet the structural limitations recited in claim 61, Applicants respectfully submit that independent claim 61, and dependent claim 62 are patentable.

Rejections Under 35 U.S.C. §103

The Examiner rejected claims 49 and 54-55 under 35 U.S.C. §103(a) as being unpatentable over Kohrs (U.S. Patent 5,609,636) in view of Zdeblick et al. (U.S. Patent 5,669,909). Applicants respectfully traverse this rejection, however have amended claim 49 to advance this application to allowance.

Claim 49 recites an implant having a plurality of columns that connect first and second load bearing surfaces. The columns are aligned at the longitudinal axis of the implant.

Neither Kohrs nor Zdeblick teach or suggest a plurality of columns that are aligned at the longitudinal axis of an implant. Rather, for example, supports 405-410 of Kohrs are offset from the longitudinal axis of the implant 400 to define a hollow central interior 430. Likewise, the implant of Zdeblick has sidewalls 22 and a hollow central interior 15.

At least because neither Kohrs nor Zdeblick teaches or suggests columns aligned at the longitudinal axis of the implant, Applicants respectfully submit that independent claim 49, and dependent claims 54-55 are patentable.

New Claims 63-72

New claim 63 recites an implant body having a first end and a second end. The body includes a central support member positioned in alignment with the longitudinal axis of the implant body. A first traverse member is positioned at a first support end of the central support member. A second traverse member is positioned at a second support end of the central support member. Each of the first and second traverse members extends from the first end of the implant body to the second end of the implant body, and the central support member is configured to maintain a spatial relation between the first and second traverse members.

None of the cited art teaches the structural limitations recited in claim 63. For example, neither Kohrs nor Zdeblick teaches an implant having a central support member positioned in alignment with the longitudinal axis of the implant body. Also, Knothe does not teach a central support member configured to maintain a spatial relation between the first and second traverse members. Applicants respectfully submit that independent claim 63, and dependent claims 64-67 are patentable.

New claim 68 recites an implant including an implant body having a first end and a second end. The implant body also includes a first traverse member having opposite first free ends, a second traverse member having opposite second free ends, and a central support member that bisects each of the first and second traverse members. The first and second traverse members extend from the first end to the second end of the implant.

None of the cited art teaches the structural limitations recited in claim 68. For example, neither Kohrs nor Zdeblick teaches an implant having a central support member that bisects first and second traverse members. Also, Knothe does not teach first and second traverse members having free ends. Applicants respectfully submit that independent claim 68, and dependent claims 69-71 are patentable.

New claim 72 recites an implant including an implant body having length, the length extending from a first end to a second end. The implant body has first and second traverse members and a support member that bisects each of the first and second traverse members. The support member is configured to provide rigid support of the first and second traverse member. The implant also includes first and second channels centrally located between the first and second traverse members. The first and second channels extend along the length of the implant body. The channels are defined by continuous surfaces of each of the first and second traverse members, the continuous surfaces of the first and second traverse members extending along the length of the implant body.

None of the cited art teaches the structural limitations recited in claim 72. For example, neither Kohrs nor Zdeblick teaches an implant having a central support member that bisects first and second traverse members. Also, Knothe does not teach a support member that provides rigid support of the first and second traverse members. Applicants respectfully submit that independent claim 72 is patentable.

Allowable Subject Matter

The Examiner indicated that claims 1, 36-47, 50, 53, 56, and 57 would be allowed upon the submission of a proper terminal disclaimer. Applicants have herewith submitted a terminal disclaimer and submit that the application is now in condition for allowance.

SUMMARY

It is respectfully submitted that each of the presently pending claims (claims 1, 36-47, 49-50, and 53-72) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future.

Respectfully submitted,



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MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300


Karen A. Fitzsimmons
Reg. No. 50,470
KAF:cjm